

STRAIN AND STRESS OF A LINE

BY

GORDON WILLIAMSON

Submitted to the faculty of the
Jacobs School of Music in partial fulfillment
of the requirements for the degree,
Doctor of Music,
Indiana University
December, 2012

Accepted by the faculty of the Jacobs School of Music, Indiana University, in partial fulfillment of the requirements for the degree Doctor of Music.

David Dzubay, Chairman of the Research Committee
& Director of Document

Claude Baker

P.Q. Phan

strain and stress of a line

for large orchestra

GORDON WILLIAMSON

strain and stress of a line

As the title suggests, this 12-minute work is a piece about lines. The idea of ‘line’ music is almost always thought of in terms of melody, and the listener will quickly notice that the lines at issue here are non-melodic. The work’s first clear linear element in the score begins as a simple horizontal line: a long unison note in the orchestra. This unison is pushed and pulled around the physical space of the orchestra, and the note itself is pushed and pulled out of tune while being subjected to numerous timbral and color variations. The loud, punctuated tutti chords that are juxtaposed against the long, shifting horizontal line are themselves isolated vertical lines or sonorities. But the continual play on the thickness of the horizontal line, combined with the very slow repetition of the sonority, suggests another possibility: could these large chords not also be very short iterations of extremely thick horizontal lines? The ensuing organic development of the principal horizontal line seems to lead us, in hindsight, to an affirmation of this alternative interpretation of the opening of the work. It is subjected to all manner of contortions: at first the thickening of the line is expanded to a degree whereby small clusters and then more clearly discernable harmonies can be heard in the orchestra in ever shorter segments. Eventually, the line is even stretched and twisted through glissandi: neither horizontal nor vertical, but somewhere on a changing curve in between the two apparent extremes from the opening of the work. The slow persistence of the idea of lines for the duration of the piece eventually forces the listener’s focus on to other musical characteristics, and the listener becomes oblivious to the lines themselves.

This idea is in part inspired by the Italian *La Linea* film shorts, where all of the action stems from a single line. In this piece it is timbres and colors from the orchestra that take over our attention. Shifting blocks of sound move around the orchestra, often in distinct registers or orchestral colors, like thick brush strokes on the acoustic canvas of the work. These figures settle into a section of rhythmic swells, the first clear pulse of the piece. Here, another feature of the work begins to take shape: an overall accelerando or speeding up of activity that occurs very slowly over the duration of the entire work. This effect is, in and of itself, yet another linear element or line in the piece. In this latter section of the work, what were once swells are now simple, pulsating crescendo figures. The punctuated peaks of the crescendos become a dominating rhythmic element, even reminiscent of the opening punctuated chords of the work. Against this framework, the long and steady unison from the opening of the work makes a return appearance, a highly elongated version of the crescendo figure. In a way the work has come full circle, despite its having moved steadily in a single direction for 12 minutes. But, in reality, the piece never really departed from its focus on the main material: lines.

DURATION: ca. 12'

PERFORMANCE NOTES:

1. The '*timbral trill*' marking calls for wind or brass players to use an alternate fingering trill (trill to another fingering of the same note).
2. The dynamic indication '*n*' is niente; either to or from nothing.
3. The '**molto s.p.**' indication in the strings is molto sul ponticello.
4. Some 1/8 tones are called for in the strings, and are marked *beating*. The player should drop the pitch to the point where interference beating is clearly heard, rather than to try and determine a precise 1/8 tone.

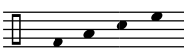
ORCHESTRA:

3 FLUTES (3rd doubling Piccolo)
3 OBOES
3 CLARINETS IN B \flat (3rd doubling B \flat Bass Clarinet)
2 BASSOONS
1 CONTRABASSOON


4 HORNS IN F
3 TRUMPETS IN C
3 TROMBONES
1 TUBA

PERCUSSION 1:


4 TOMS



SUSPENDED CYMBAL



CROTALES
(USE 2 BOWS)



PERCUSSION 2:

4 TOMS



SUSPENDED CYMBAL



BASS DRUM
(SIDE-MOUNTED)



MARIMBA
(4 OCTAVES)

GLOCKENSPIEL

PERCUSSION 3:

4 TOMS



SUSPENDED CYMBAL



BASS DRUM
(SIDE-MOUNTED)



VIBRAPHONE
(USE BOW)

CROTALE
(USE BOW)



HARP

STRINGS

ALL INSTRUMENTS ARE NOTATED IN THEIR RELEVANT TRANSPOSITIONS

strain and stress of a line
(2006)

[illegible]

[illegible]

[illegible][illegible]

16

18

Fl. (a2)

Picc.

Ob.

Cl.

Bass

Bsn.

Cbn.

Hn.

Tpt.

Tbn.

Tb.

Perc. 2

Hp.

pp sempre

ppp *p* *n*

ppp *p* *n*

harmon, stem in

ppp *pp*

harmon, stem in a2

ppp *p* *n*

timbral trills:

n

18

Rehearsal mark 18 is indicated by a box containing the number 18. The score for measures 16-19 is as follows:

- Measure 16:** Vln. I solo, 16 (8va) -
- Measure 17:** Vln. I solo, ord. (non div.)
- Measure 18:** Vln. I solo, n
- Measure 19:** Vln. I solo, join tutti div. a 2

The score includes various musical notations such as dynamics (pp, p, n, m.s.p.), articulation (dim, cresc), and performance instructions (ord. (non div.), join tutti div. a 2).

This page of the musical score contains the following staves and markings:

- Woodwinds:**
 - Fl. (Flute): Measures 21-24, dynamics *n* to *p*.
 - Picc. (Piccolo): Rests throughout.
 - Ob. (Oboe): Measures 21-24, dynamics *pp* to *p*.
 - Cl. (Clarinet): Measures 21-24, dynamics *pp* to *p*.
 - Bass (Bassoon): Measures 21-24, dynamics *n* to *pp*.
 - Bsn. (Bassoon): Measures 21-24, dynamics *ppp* to *p*.
 - Cbn. (Contrabassoon): Rests throughout.
- Brass:**
 - Hn. (Horn): Measures 21-24, dynamics *ppp* to *p*.
 - Tpt. (Trumpet): Measures 21-24, dynamics *ppp* to *p*.
 - Tbn. (Trombone): Measures 21-24, dynamics *pp* to *p*.
 - Tb. (Tuba): Rests throughout.
- Percussion:**
 - Perc. 1 (Crotales): Measures 21-24, dynamics *n* to *p*.
 - Perc. 2 (Vibraphone): Measures 21-24, dynamics *n* to *p*.
 - Hp. (Harp): Measures 21-24, dynamics *n* to *pp* sempre.
- Strings:**
 - Vln. I (Violin I): Measures 21-24, dynamics *n* to *pp* sempre.
 - Vln. II (Violin II): Measures 21-24, dynamics *n* to *pp*.
 - Vla. (Viola): Measures 21-24, dynamics *n* to *p*.
 - Vc. (Violoncello): Measures 21-24, dynamics *pp* sempre.
 - Cb. (Contrabasso): Measures 21-24, dynamics *n* to *p*.

The score includes various musical notations such as notes, rests, dynamics (*pp*, *p*, *n*), and performance instructions like "con sord." and "senza sord.".

26

27

1.

timbral trill

$n < pp$

n

Fl.

Picc.

1.

2.

3.

Ob.

timbral trill

$ppp < pp$

n

1.

2.

Cl.

timbral trills:

$n < pp$

n

Bass

Bsn.

Cbn.

1.

2.

Hn.

3.

4.

1.

2.

3.

Tpt.

1.

2.

3.

Tbn.

Tb.

1.

2.

3.

Perc.

marimba

soft mallets

(bowed crot.)

n

p

n

p

pp sempre

n

(bowed vibe.)

n

p

l.v.

l.v.

Hp.

26

27

8^{va}

con sord.

n

pp sempre (non div.)

1/8

(3 soli)

dim

n

tutti div. a 2:

n

senza sord.

(non div.)

1/8

p

Vln. II

(inside players)

n

(non div.)

n

poco a poco cresc.

(non div.)

1/8

p

n

Vla.

div. a 2

n

n

p

n

Vc.

div. a 2

ord.

n

p

n

con sord.

n

pp

Cb.

div. a 2

ord.

n

n

p

n

n

p

n

[illegible]

41

Fl. 1 2 *n* $\langle p \rangle$ *n* to piccolo

Ob. 1 2 3

Cl. 1 2 *a2* *n* $\langle p \rangle$ *n*

Bass

Bsn. 1 2 *n*

Cbn. *pp* *n*

Hn. 1 2 3 4

Tpt. 1 *harmon, stem in* *pp* *n*

2 3

Tbn. 1 2 *harmon, stem in* *a2* *ppp* *p* *n*

3

Tb.

Perc. 1 *crotales* bowed *l.v.* *p*

2

3 *vibraphone* bowed *l.v.* *p*

Hp. *n*

41

Vln. I div. a 2 *senza sord.* *n* *pp* *n*

Vln. II div. a 2 *n* *n*

Vla. div. a 2 *con sord.* *n* *p dim* *n*

Vc. div. a 2 *n* *pp* *n*

Cb. div. a 2 *tutti* *n* *pp* *n*

[illegible]

Fl. 1 2 *p* *n*

Picc. *pp* *n*

Ob. 1 2 3 *pp* *n* *pp* *pp* *n*

Cl. 1 2 *p* *n* *timbral trill*

Bass *p* *n* *timbral trill*

Bsn. 1 2 *p* *n*

Cbn. *pp* *n*

Hn. 1 2 3 4 *ppp* *p* *n* *ppp* *p* *n*

Tpt. 1 2 3 *ppp* *p* *n* *a2* *ppp* *p* *n*

Tbn. 1 2 3 *ppp* *p* *n* *a2 open* *ppp* *p* *n*

Tb. *ppp* *p* *n*

Perc. 1 *l.v.* *p*

Perc. 2 (glock., soft rubber mallets) *ppp* *sempre*

Perc. 3 *l.v.* *p* *(8va)*

Hp. *p*

Vln. I div. a 2 *n* *n* *p* *n* (non div.) 1/8 *n* *p* *n* solo *pp* *sempre* *n*

Vln. II solo *n* *p* *n* *n* *pp* *tutti* *n*

Vln. II gli altri div. a 2 (non div.) 1/8 *n* *p* *n* (non div.) 1/8 *n* *p* *n* *n*

Vla. solo *pp* *sempre* *pp* *n*

Vla. gli altri div. a 2 *pp* *n*

Vc. div. a 2 *n* *pp* *n* Vc. solo *n* solo *n*

solo Cb. gli altri *n* solo *n* *pp* *n*

Fl. 1 2 *a2* *n* *p* *n* *to flute*

Picc. *pp* *n*

Ob. 1 2 3

Cl. 1 2 *a2* *timbral trill* *n* *p* *n* *to Bb clarinet*

Bass

Bsn. 1 2 *a2* *n* *p* *n*

Cbn. *pp*

Hn. 1 2 *1. °* *ppp* *p* *n*

3 4 *3. °* *ppp* *p* *n*

(harmon) *pp* *n*

Tpt. 1 2 3 *pp* *n*

Tbn. 1 2 3 *straight mute* *pp* *n*

Tb. *pp* *n*

Perc. 1 (bowed crot.) *p* *l.v.* *toms* (soft mallets) *ppp poss.* *pp* *ppp*

2 (glock.) *p* *l.v.*

3 (bowed vib.) *p* *l.v.* *bass drum* (soft mallets) *ppp poss.* *pp* *ppp*

Hp. *n*

Vln. I div. a 2 *pp* (solo) *tutti* *n*

Vln. II solo

Vln. II gli altri div. a 2 *p* *n* (non div.) *1/8 n* *p* *n*

solo *p* *n* (non div.) *1/8 n* *p* *n*

Vla. m.s.p. ord. (non div.) *1/8 n* *p* *n*

gli altri *p* *n* (solo)

Vc. div. a 2 (solo) *pp*

solo *n* *n* *pp*

Cb. gli altri *n* *pp*

61

tutti unis. *fff* *mp* (non div.) m.s.p. → ord.

Vln. 1

tutti unis. *fff* *mp* (non div.) m.s.p. → ord.

Vln. 2

tutti unis. *fff* *mp* (non div.) m.s.p. → ord.

Vla.

tutti div. *fff* *f* sempre unis. *f*

Vc.

tutti div. *fff* *f* m.s.p. → ord.

Cb.

tutti div. *fff* *f* m.s.p. → ord.

67

Fl. 1 2 *mp* < *fff* > *mp* *f* sempre *mp* < *fff* > *mp*

Fl. 3 *mp* < *fff* > *mp* *f* sempre *mp* < *fff* > *mp*

Ob. 1 *mp* < *fff* > *mp* *f* sempre *mp* < *fff* > *mp*

Ob. 2 3 *mp* < *fff* > *mp* *f* sempre *mp* < *fff* > *mp*

Cl. 1 2 *mp* < *fff* > *mp* *f* sempre *mp* < *fff* > *mp*

Cl. 3 *mp* < *fff* > *mp* *f* sempre *mp* < *fff* > *mp*

Bsn. 1 2 *f* sempre *f* sempre

Cbn. *p* < *fff* > *p* *fff* > *p*

Hn. 1 2 *mp* *mp* < *ff* > *mp* *mp* < *ff* > *mp* *ff* > *mf*

Hn. 3 4 *mp* *mp* < *ff* > *mp* *mp* < *ff* > *mp* *ff* > *mf*

Tpt. 1 *p* *mp* < *ff* > *mp* *mf* sempre *mp* < *ff* > *mp* *ff* > *mp*

Tpt. 2 3 *p* *mp* < *ff* > *mp* *mf* sempre *mp* < *ff* > *mp* *ff* > *mp*

Tbn. 1 2 *f* sempre *mp* < *ff* > *mp* *mp* < *ff* > *mp* *ff* > *p*

Tbn. 3 *f* sempre *mp* < *ff* > *mp* *p* < *ff* > *p*

Tb. *f* sempre *mp* < *ff* > *mp* *mp* < *ff* > *mp*

(toms) *mf* *p* < *ff* > *p* *ff* > *mf* *p* < *ff* > *p*

Perc. 2 *sus. cymb.* *p* < *ff* > *mf* *toms* *p* < *ff* > *p* *ff* > *mp* *sus. cymb.* *mf* < *ff* > *mf*

(b.d.) *mf* *p* < *ff* > *p* *ff* > *mf* *p* < *ff* > *p*

Hp.

Vln. 1 67 *div.* *mp* < *fff* > *p* *mp* < *ff* > *p* *mf* *fff* > *p* *mp* < *fff* > *p*

Vln. 2 *div.* *mp* < *fff* > *p* *mp* < *ff* > *mp* *mf* *fff* > *p* *mf* < *fff* > *p*

Vla. *div.* *mf* *fff* > *p* *p*

Vc. *div.* *mf* *fff* > *mp*

Cb. (div.) *fff* > *mp*

73 poco a poco accel. -----

Fl. *ff* *p* *mf* sempre

Ob. *mp* *fff* *pp* *mf* sempre timbral trills: *mf* sempre

Cl. *mf* *fff* *p* *mf* *fff* *p*

Bsn. *mf* *fff* *p*

Cbn. *mf* *fff* *p*

Hn. *ff* *mp* *mf* sempre *pp* *p* *ff* *pp*

Tpt. *ff* *mf* *p* *mf* sempre *pp* *p* *ff* *pp*

Tbn. *ff* *mp* *mf* sempre *pp* *p* *ff* *pp*

Tb. *ff* *mp* *p* *mf* sempre *pp* *p* *ff* *pp*

Perc. 2 *p* *ff* *p* *pp* *mp* *p* *pp*

Perc. 3 *p* *ff* *p* *pp* *mp* *p* *pp*

Hp. *p* *ff* *p* *pp* *mp* *p* *pp*

73 poco a poco accel.

The musical score for measures 73-78 is written for five staves: Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola (Vla.), Violoncello (Vc.), and Contrabasso (Cb.). The key signature has two flats (B-flat and E-flat), and the time signature is 4/4. The tempo/mood marking is 'poco a poco accel.'. The score is divided into two systems of three measures each. In the first system, measures 73 and 74, the Violin parts play a melodic line with a crescendo from *ff* to *mf*, while the Viola, Cello, and Double Bass parts play a sustained harmonic line with a crescendo from *ff* to *p*. In the second system, measures 75 and 76, the Violin parts play a melodic line with a crescendo from *pp* to *fff*, while the Viola, Cello, and Double Bass parts play a sustained harmonic line with a crescendo from *mp* to *fff*. The final measure (78) shows the Violin parts playing a melodic line with a crescendo from *mp* to *fff*, while the Viola, Cello, and Double Bass parts play a sustained harmonic line with a crescendo from *mp* to *fff*.

[illegible]

91

 = 96

1 2
Fl.

1 2 3
Ob.

1 2 3
Cl.

1 2
Bsn.

Cbn.

1 2
Hn.

1 2 3
Tpt.

1 2 3
Tbn.

Tb.

1
Perc. 2
3

Hp.

91

 = 96

Vln. I
div. a 4

Vln. II
div. a 4

Vla.
div. a 2

Vc.
div. a 2

Cb.
div. a 2

1 2
Fl.
3

1 2 3
Ob.

1 2 3
Cl.

1 2
Bsn.
3

Cbn.

1 2
Hn.
3 4

1 2 3
Tpt.

1 2
Tbn.
3

Tb.

1
Perc. 2
3

Hp.

Vln. I
div. a 4

Vln. II
div. a 4

Vla.
div. a 2

Vc.
div. a 2

Cb.
div. a 2

div. a 4:

div. a 2:

103

1 2
Fl.

1 2 3
Ob.

1 2 3
Cl.

1 2
Bsn.

Cbn.

1 2
Hn.

3 4
Tpt.

1 2 3
Tbn.

Tb.

1
Perc. 2

3

Hp.

103

Vln. I
div. a 4

Vln. II
div. a 4

Vla.
div. a 2

Vc.
div. a 2

Cb.
div. a 2

Fl.

1

2

3

Ob.

1

2

3

Cl.

1

2

3

Bsn.

1

2

Cbn.

1

2

Hn.

1

2

3

4

Tpt.

1

2

3

Tbn.

1

2

3

Tb.

1

2

Perc.

1

2

3

Hp.

1

2

Vln. I

div. a 2

Vln. II

div. a 2

Vla.

div. a 2

Vc.

div. a 2

Cb.

div. a 2

115 accel.



Fl. 1. *n* *p* *pp* sempre *n* *n* *p* *pp* sempre *n*

Ob. 1. *n* *p* *pp* sempre *n* *n* *p* *pp* sempre *n*

Cl. 1. *n* *p* *pp* sempre *n* *p* *pp* sempre *n*

Bsn. 1. *n* *p* *pp* sempre *n* *p* *pp* sempre *n*

Cbn. 1. *n* *p* *pp* sempre *n* *p* *pp* sempre *n*

1						
Perc. 2						
3						

Hp.

The image shows a musical score for a Harp (Hp.). It consists of two staves, a treble staff and a bass staff, grouped by a brace on the left. Each staff contains six measures, each with a whole rest. The measures are separated by vertical bar lines.

115 **accel.**

The musical score for measures 115-120 is marked 'accel.' and features a complex arrangement of instruments. The score is written for Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Contrabasso (Cb.). The key signature is one flat (B-flat major or D minor). The time signature is 4/4. The score includes various musical notations such as notes, rests, and dynamic markings. The first measure (115) starts with a forte (f) dynamic. The second measure (116) features a 'div. a 4' (divisi a 4) marking for the Violin I and Violin II parts. The third measure (117) features a 'div. a 2' (divisi a 2) marking for the Violoncello and Contrabasso parts. The fourth measure (118) features a 'div. a 4' marking for the Violoncello and Contrabasso parts. The fifth measure (119) features a 'div. a 2' marking for the Violoncello and Contrabasso parts. The sixth measure (120) features a 'div. a 2' marking for the Violoncello and Contrabasso parts. The score concludes with a final measure (120) featuring a forte (f) dynamic.

[illegible]

127

Fl.

1 2 3

Ob.

1 2 3

Cl.

1 2 3

Bsn.

1 2

Cbn.

Hn.

1 2 3 4

Tpt.

1 2 3

Tbn.

1 2 3

harmon, stem in
ppp *poss.* *p*

Tb.

2. *ppp* *poss.* *p*

Perc.

1 2 3

Hp.

127

132

Vln. I

div. a 2

(solo)
n *p*

Vln. II

div. a 2

(solo)
p

Vla.

div. a 2

(solo)
n *p*

Vc.

div. a 2

(solo)
n *p*

Cb.

2 soli div.
inside tutti, div.

2 soli div.
inside tutti, div.

133

Fl. 1 2 3

Ob. 1 2 3

Cl. 1 2 3

Bsn. 1 2

Cbn.

Hn. 1 2 3 4

Tpt. 1 2 3

Tbn. 1 2 3

Tb.

Perc. 1 2 3

Hp.

Detailed description: This block contains the musical notation for measures 133 through 138 for the woodwind and percussion sections. The Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Bsn.), and Contrabassoon (Cbn.) parts are mostly silent, indicated by whole rests. The Horns (Hn.), Trumpets (Tpt.), and Trombones (Tbn.) have melodic lines starting in measure 133. The Horns and Trombones play a descending eighth-note scale (Bb4, Ab4, Gb4, Fb4) followed by a quarter rest. The Trumpets play a similar pattern but with a different articulation. The Trombones have a more complex line with some accidentals. The Tuba (Tb.) has a single note in measure 138. The Percussion (Perc.) and Harp (Hp.) parts are silent throughout this section.

133

Vln. I solo div. a 2

Vln. II solo div. a 2

Vla. div. a 2

Vc. solo div. a 2

Cb.

gli altri

Detailed description: This block contains the musical notation for measures 133 through 138 for the string section. The Violins I (Vln. I) and Violins II (Vln. II) are marked 'solo' and play a descending eighth-note scale (Bb4, Ab4, Gb4, Fb4) followed by a quarter rest. The Viola (Vla.) and Violoncello (Vc.) parts are marked 'div. a 2' and play a similar pattern. The Contrabass (Cb.) part is silent. The string parts are marked with 'n' for 'no' and 'p' for 'piano'. The Violins I and II parts are marked '2 soli' in measure 135. The Viola and Violoncello parts are marked '2 soli' in measure 135. The Violoncello part is marked 'solo' in measure 133. The Contrabass part is marked 'solo' in measure 133. The string parts are marked with 'gli altri' in measure 135.

1
2
3
Fl.

1
2
3
Ob.

1
2
3
Cl.

1
2
Bsn.

Cbn.

(1.) + → ∞
1
2
Hn. *ppp* < *p*
poss.

(3.) + → ∞
3
4
ppp < *p*
poss.

1
2
3
Tpt. harmon, stem in
ppp < *p*
poss.

1
2
3
Tbn. (2.) ∞
ppp < *p*
poss.

Tb. *p*
ppp < *p*
poss.

1
Perc. 2
3

Hp.

Vln. I
div. a 2
tutti
div. a 2:
n < *p*
n < *p*

Vln. II
div. a 2
tutti
div. a 2:
n < *p*
n < *p*

Vla.
div. a 2
2 soli
n < *p*
2 soli
n < *p*

Vc.
div. a 2
gli altri
n < *p*
2 soli
n < *p*

Cb.
n < *p*
tutti
div. a 4:
n < *p*

145

Fl. 1 2 3

Ob. 1 2 3

Cl. 1 2 3

Bsn. 1 2

Cbn.

Hn. 1 2 3 4

Tpt. 1 2 3

Tbn. 1 2 3

Tb.

Perc. 1 2 3

Hp.

(mar.) bowed

(vibe.) bowed

Reo *n* *sempre* *p*

145

Vln. I div. a 4

Vln. II div. a 4

Vla. div. a 4

Vc. div. a 2

Cb.

2 soli

tutti div. a 4:

div. a 2

tutti div. a 2:

157

Fl. 1 2 3

Ob. 1 2 3

Cl. 1 2 3

Bsn. 1 2

Cbn.

Hn. 1 2 3 4

Tpt. 1 2 3

Tbn. 1 2 3

Tb.

Perc. 1 2 3

Hp.

This section of the score covers measures 157 to 162 for the woodwind and percussion ensembles. The Flutes (Fl.), Oboes (Ob.), and Clarinets (Cl.) are active in measures 157-162, playing a rhythmic pattern of eighth and sixteenth notes with accents and dynamic markings of *p* and *<p*. The Bassoons (Bsn.) and Contrabassoon (Cbn.) are silent. The Horns (Hn.), Trumpets (Tpt.), and Trombones (Tbn.) enter in measure 159, playing a sustained chord with a crescendo from *ppp* to *p*, marked *poss.* (possible). The Tuba (Tb.) is silent. The Percussion (Perc.) section includes a snare drum (Perc. 2) and a cymbal (Perc. 3). The snare drum plays a rhythmic pattern in measures 157-162, with dynamics ranging from *n* to *p*. The cymbal plays a sustained chord in measures 157-162, with dynamics ranging from *n* to *p*. The Harp (Hp.) is silent.

157

Vln. I div. a 4

Vln. II div. a 4

Vla. div. a 4

Vc. div. a 2

Cb. div. a 2

This section of the score covers measures 157 to 162 for the string ensembles. The Violins I (Vln. I) and Violins II (Vln. II) are divided into four parts each (div. a 4). They play a rhythmic pattern of eighth and sixteenth notes with accents and dynamic markings of *n* and *p*. The Violas (Vla.) are divided into four parts (div. a 4) and play a sustained chord with a crescendo from *n* to *p*. The Violoncellos (Vc.) and Contrabasses (Cb.) are divided into two parts each (div. a 2). They play a sustained chord with a crescendo from *n* to *p*. The Violins I and II also play a sustained chord with a crescendo from *n* to *p*. The Violas also play a sustained chord with a crescendo from *n* to *p*. The Violoncellos and Contrabasses also play a sustained chord with a crescendo from *n* to *p*.

[illegible]

167

163

Vln. I
div. a 2

div. a 2:

n < p

solo

n < p

n < p

n < p

n < p

n < p

2 soli

n < p

n < p

Vln. II
div. a 4

div. a 2

p

n < p

n < p

n < p

n < p

n poco a poco cresc.

Vla.
div. a 4

p

n < p

n < p

n < p

n < p

solo

gli altri

n < p

n < p

fz

Vc.
div. a 2

div. a 2:

n < p

solo

n < p

gli altri div.

n < p

unis.

III

n < p

n

fz

Cb.
div. a 2

n < p

n

fz

n

fz

1
2
Fl. *mp*

3
Ob. 1
2
3

1
2
3
Cl. *p* *sempre*
2.
p *sempre*

1
2
Bsn. 1
2

Cbn.

1
2
Hn. 3
4

1
2
3
Tpt.

1
2
3
Tbn. *plunger*
ppp *poss.* *p*
2.
ppp *poss.* *p*

1
2
3
Tb. *plunger*
ppp *poss.* *p*
2.
ppp *poss.* *p*

1
Perc. 2
3
(bowed mar.) *n* *p*
(bowed vib.) *n* *p*
(*cel.*) *n* *p*

Hp.

solo
Vln. I *n* *p*
gli altri *n* *p*
Vln. II
2 soli *n* *p*
Vln. II
gli altri
div. a 2 *(cresc.)* *pp* *n*
2 soli (con. sord.) *n* *p*
solo *senza sord.* *n* *p*
Vla. *senza sord.* *n* *p*
gli altri *senza sord.* *n* *p*
Vc. *senza sord.* *n* *p*
gli altri *senza sord.* *n* *p*
Cb. *div. senza sord.* *n* *p*
unis. *n* *p*

187

Fl. 1 2 3

Ob. 1 2 3

Cl. 1 2 3

Bsn. 1 2

Cbn.

Hn. 1 2 3 4

Tpt. 1 2 3

Tbn. 1 2 3

Tb.

Perc. 1 2 3

Hp.

Vln. I tutti

Vln. II tutti

Vla. tutti

Vc. tutti

Cb. tutti

192

1

2

3

Fl.

1

2

3

Ob.

1

2

3

Cl.

1

2

3

Bsn.

1

2

Cbn.

1

2

3

4

Hn.

1

2

3

4

Tpt.

1

2

3

Tbn.

1

2

3

Tb.

1

2

3

Perc.

1

2

3

Hp.

1

2

3

4

Vln. I

1

2

3

4

Vln. II

1

2

3

4

Vla.

1

2

3

4

Vc.

1

2

3

4

Cb.

1

2

3

4

192

1

2

3

Vln. I

1

2

3

4

Vln. II

1

2

3

4

Vla.

1

2

3

4

Vc.

1

2

3

4

Cb.

1

2

3

4

- Page 35 -

1 2
Fl.
Picc.
1 2 3
Ob.
1 2 3
Cl.
1 2
Bsn.
Cbn.

1 2 3 4
Hn.
1 2 3
Tpt.
1 2 3
Tbn.
1 2 3
Tb.

1 2 3
Perc.
Hp.

Vln. I
div. a 2
Vln. II
Vla.
div. a 2
Vc.
Cb.

204

[illegible]

1
Perc. 2
3

1 2 3 4 5 6

Hp.

204

204

Vln. I

unis. *f* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Vln. II
div. a 2

f *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Vla.
div. a 2

pp *f* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Vc.

unis. *f* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Cb.

f *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

216

Fl. 1 2

Picc.

Ob. 1 2 3

Cl. 1 2 3

Bsn. 1 2

Cbn.

Hn. 1 2 3 4

Tpt. 1 2 3

Tbn. 1 2 3

Tb.

Perc. 1 2 3

Hp.

216

Vln. I div. a 2

Vln. II div. a 2

Vla. div. a 2

Vc. div. a 2

Cb.

(accel.) $\bullet = 168$ **230** ($\circ = 84$) accel.

228

Fl. 1 2 *f* *< f* *< f* *< f* *< f* *< f*

Picc. *f* *< f* *< f* *< f* *< f* *< f*

Ob. 1 2 3 *< f* *< f* *ff sempre* *ff sempre* *ff sempre* *ff sempre*

Cl. 1 2 3 *< f* *< f* *ff sempre* *ff sempre* *ff sempre* *ff sempre*

Bsn. 1 2 *< f* *< f* *ff sempre* *ff sempre* *ff sempre* *ff sempre*

Cbn. *< f* *< f* *ff sempre* *ff sempre* *ff sempre* *ff sempre*

Hn. 1 2 3 4 *sfz* *pp* *ffz* *p* *ffz* *p* *ffz* *p* *ffz* *p* *ffz* *p*

Tpt. 1 2 3 *pp* *ffz* *p* *ffz* *ffz* *p* *ffz* *p* *ffz* *p* *ffz* *p*

Tbn. 1 2 3 *pp* *sfz* *ffz* *a2* *ffz* *p* *ffz* *ffz* *p* *ffz* *ffz* *p*

Tb. *ffz* *ffz* *ffz* *ffz* *ffz* *ffz*

Perc. 1 2 3 (mar.) (hard mallets) *f sempre* *sim.* *f* *sim.* *f* *sim.*

Hp. *f* *sim.* *f* *sim.* *f* *sim.*

Vln. I div. a 2 *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Vln. II *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Vla. *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Vc. *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

Cb. *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz* *pp* *sfz*

gli altri *n* *pp sempre* *pp sempre* *pp sempre* *pp sempre* *pp sempre*

(accel.)

234

Fl.

Picc.

Ob.

(a2)

Cl.

(a2)

Bsn.

Cbn.

Hn.

(a2)

Tpt.

Tbn.

Tb.

(toms)

Perc.

(mar.)

(sus. cymb.)

Hp.

(accel.)

234

Vln. I

div. a 2

Vln. II

Vla.

Vc.

Cb.

tutti

cresc . . .

p

(non div.)

n

cresc . . .

p

96

246 (accel.) ----- $\text{♩} = 108$

Fl. 1 2

Picc.

Ob. 1 2 3

Cl. 1 2 3

Bsn. 1 2

Cbn.

Hn. 1 2 3 4

Tpt. 1 2 3

Tbn. 1 2 3

Tb.

Perc. 1 2 3

Hp.

Fl. 1 2: *ffp* (a2) *mp cresc...* *ffp* *f* *fff*

Picc.: *ffp* (a2) *mp cresc...* *ffp* *f* *fff*

Ob. 1 2 3: *ffp* (a2) *mp cresc...* *ffp* *f* *fff*

Cl. 1 2 3: *ffp* (a2) *mp cresc...* *ffp* *f* *fff*

Bsn. 1 2: *ffp* (a2) *mp cresc...* *ffp* *f* *fff*

Cbn.: *ffp* *mp cresc...* *ffp* *f* *fff*

Hn. 1 2 3 4: *pp* (a2) *fffz* *p* *fffz* *ffp* (flz.) *f* (flz.) *fffz*

Tpt. 1 2 3: *fffz* (a2) *fffz* *fffz* *fffz* *p* *fffz* *ffp* (flz.) *f* (flz.) *fffz*

Tbn. 1 2 3: *p* (a2) *fffz* *fffz* *fffz* *ffp* (flz.) *f* (flz.) *fffz*

Tb.: *p* *mp cresc...* *mf* *f* *fffz*

Perc. 1: *ff* sempre (toms) *ff* sempre (sus. cymb.) *ff* sempre (toms) *p* *ff*

Perc. 2: *ff* sempre (toms) *ff* sempre (b.d.) *ff* sempre

Perc. 3: *ff* sempre (sus. cymb.) *ff* sempre *mp* *ff*

Hp.: *ff* sempre

246 (accel.) ----- $\text{♩} = 108$

Vln. I (non div.)

Vln. II

Vla.

Vc.

Cb.

Vln. I: *pp* *mf cresc...* *f* *ff* *fff*

Vln. II: *mf (cresc.)* *f* *ff* *fff*

Vla.: *mf (cresc.)* *f* *ff* *fff*

Vc.: *mf (cresc.)* *f* *ff* *fff*

Cb.: *mf (cresc.)* *f* *ff* *fff*